List of Claims:

- (Currently Amended) A process for reforming a hydrocarbon feed containing precursors of ethylbenzene to produce a reformate having increased xylenes content and reduced ethylbenzene content, said process comprising:
 - contacting said feed with a reforming catalyst under conditions effective to reform said feed to form an effluent comprising ethylbenzene; wherein said reforming catalyst is contained in a reactor which contains a second catalyst effective under said conditions to convert at least 25% of said ethylbenzene to xylenes.
- (Original) The process recited in Claim 1, wherein said precursors of ethylbenzene are selected from the group consisting of C₈ isoalkane precursors of ethylbenzene, C₈ isoalkene precursors of ethylbenzene, and mixtures thereof.
- 3. (Original) The process recited in Claim 1, wherein said precursors of ethylbenzene are selected from the group consisting of ethyl-cyclohexane, ethyl-cyclohexenes, 3-ethylhexane, 3-ethylhexane, 3-ethylhexane, 3-methylhexane, 3-methylheptane, 3-methylheptane, 3-methylheptane, octane, octa
- 4. (Original) The process recited in Claim 1, wherein said precursors of ethylbenzene are present in said hydrocarbon feed in an amount from about 1 to about 10 weight percent based on the weight of said hydrocarbon feed.
- 5. (Currently Amended) The process recited in Claim 1, wherein at least 40[[25]] percent of said ethylbenzene formed during the reforming of said feed is converted.
- 6. (Original) The process recited in Claim 1, wherein said hydrocarbon feed comprises 5-205°C naphtha.
- 7. (Original) The process recited in Claim 1, wherein said precursors of ethylbenzene are present in said hydrocarbon feed in an amount from about 1 to about 5 weight percent based on the weight of said hydrocarbon feed.

- (Original) The process recited in Claim 1, wherein said reforming catalyst is a bifunctional catalyst.
- 9. (Original) The process recited in Claim 1, wherein said reforming catalyst is a monofunctional catalyst.
- 10. (Original) The process recited in Claim 9, wherein said monofunctional catalyst has a structure selected from the group consisting of LTL, FAU, *BEA, AEL, PAU, MAZ, MFI, MEL, MTW, OFF, EMT, MOR, MFS, EUO, MTT, HEU, FER, TON, and AFI.
- 11. (Original) The process recited in Claim 9, wherein said monofunctional catalyst is selected from the group consisting of Silicalite, Silicalite 2, ALPO-5, zeolite L, zeolite X, zeolite Beta, zeolite Y, ETAS-10, ETGS-10, and ETS-10.
- 12. (Original) The process recited in Claim 11, wherein said hydrocarbon feed contains C₆-C₈ hydrocarbons.
- 13. (Original) The process recited in Claim 12, wherein said monofunctional catalyst is zeolite L and at least one Group VIII metal.
- 14. (Original) The process recited in Claim 13, wherein said at least one Group VIII metal is platinum.
- 15. (Original) The process recited in Claim 1, wherein said reforming is carried out at a temperature from about 300°C to about 600°C, a pressure from about 446 kPa to about 3,549 kPa, a mole ratio of hydrogen to hydrocarbons from 0.1:1 to 10:1 and a liquid hour space velocity of between 0.1 and 20.
- 16. (Original) The process recited in Claim 1, wherein said second catalyst comprises an intermediate pore size molecular sieve.
- 17. (Original) The process recited in Claim 16, where said second catalyst has a structure selected from the group consisting of AEL, AFO, AHI, DAC, EPI, FER, HEU, LAU, MFI, TON, MTT, NES, MEL, EUO, and MFS.

- 18. (Original) The process recited in Claim 16, where said second catalyst is selected from the group consisting of ZSM-5, ZSM-11, ZSM-22, ZSM-23, ZSM-48, ZSM-50, ZSM-57, ZSM-58, EU-1, NU-87, SAPO-11, and SAPO-41.
- 19. (Original) The process recited in Claim 18, where said second catalyst has unidimensional 10-membered ring pores.
- 20. (Original) The process recited in Claim 16, wherein said second catalyst is selectivated to produce a product containing greater than equilibrium amounts of para-xylene based on the total weight of xylenes present in said product.
- 21. (Original) The process recited in Claim 20, wherein said second catalyst is selectivated using an organosilicon compound.
- 22. (Original) The process recited in Claim 17, wherein at least 50 weight percent of the ethylbenzene formed during the reforming of the feed is converted.
- 23. (Original) The process recited in Claim 16, where said second catalyst further comprises at least one dehydrogenation/hydrogenation metal.
- 24. (Original) The process recited in Claim 16, where said second catalyst further comprises a binder comprising particles of molecular sieve.
- 25. (Original) The process recited in Claim 16, wherein said second catalyst has an alpha less than about 50.
- 26. (Original) The process recited in Claim 16, wherein said second catalyst is an aluminosilicate zeolite or gallosilicate molecular sieve.
- 27. (Original) The process recited in Claim 16, wherein said second catalyst is selected from the group consisting of SAPO-11, ZSM-23, ZSM-22, NU-87, ZSM-11, ZSM-50, ZSM-57, SAPO-41, and ZSM-48.
- 28. (Original) The process recited in Claim 27, wherein the product of said process contains greater than an equilibrium amount of para-xylene based on the total weight of xylenes present in the product.

- 29. (Original) The process recited in Claim 1, wherein said reactor is present in a catalytic reforming unit comprised of at least two operatively connected reactors.
- (Original) The process recited in Claim 1, wherein the reformate is cascaded over said second catalyst.
- 31. (Currently Amended) A process for producing a reformate having reduced ethylbenzene content and increased xylenes content, said process comprising:
 - contacting a hydrocarbon feed comprising C₅-205°C naphtha containing C₈ isoalkane precursors of ethylbenzene, C₈ isoalkene precursors of ethylbenzene, or mixtures thereof with a reforming catalyst under conditions effective to reform said feed to form an effluent comprising ethylbenzene; wherein said reforming catalyst is contained in a reactor which contains a second catalyst effective under said conditions to convert at least 25% of said ethylbenzene to xylenes.
- 32. (Original) The process recited in Claim 1, wherein a second catalyst comprises ZSM-5.
- 33. (Original) The process recited in Claim 32, wherein said ZSM-5 is selectivated using an organosition compound to produce greater than equilibrium amounts of paraxylene versus the other xylene isomers.
- 34. (Original) The process recited in Claim 31, wherein said reforming catalyst is a bifunctional catalyst.
- 35. (Original) The process recited in Claim 31, wherein said reforming catalyst is a monofunctional catalyst.
- 36. (Original) The process recited in Claim 33, wherein the resulting product contains greater than equilibrium amounts of para-xylene based on the total weight of xylenes present in said product.
- 37. (Original) The process recited in Claim 31, wherein at least 50 percent of the ethylbenzene converted is converted to xylenes.